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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,878

04/01/2005

Yukiro Kashima

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EXAMINER

GUZMAN, APRIL S

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

01/10/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/529,878	<b>Applicant(s)</b> KASHIMA ET AL.	
	<b>Examiner</b> April S. Guzman	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-10 is/are rejected.
- 7) ☒ Claim(s) 11-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/01/05, 10/24/06, 3/27/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

The Examiner acknowledges the receipt of the Applicant's amendment filed on 10/25/2007. Claims 1-4 have been canceled. Claims 11-16 have been added. **Claims 5-16** are therefore currently pending in the present application.

### ***Response to Arguments***

Applicant's arguments, with respect to the rejection(s) of claim(s) 5-16 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of **Asano et al. (U.S. Patent # 6,636,181)** in view of **Crawford (U.S. Patent # 6,456,245)**.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 5-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Asano et al.** (U.S. Patent # 6,636,181) and further in view of **Crawford** (U.S. Patent # 6,456,245).

Consider **claim 5**, Asano et al. teach a terminal device (read as portable device) for connecting to a wireless network (Abstract, Figure 1, Figure 5, Figure 6, column 3 lines 66-67, and column 4 lines 1-4), the terminal device comprising:

a housing (read as base unit part 101) having a wireless module including a transmission and reception antenna (read as radio device (transmitter/receiver assembly) 108) (Abstract, Figure 5, Figure 6, and column 4 lines 19-27);

a first antenna unit (read as first antenna 106) for connection to the transmission and reception antenna physically or spatially (Figure 5, Figure 6, and column 6 lines 20-50);

a second antenna (read as second antenna 109) unit connected to the first antenna unit so as to be connected to the transmission and reception antenna via the first antenna unit, the second

antenna unit for transmitting and receiving radio signals (read as radiated radio wave 113) directly to and from the wireless network (Figure 5, Figure 6, and column 6 lines 20-50).

However, Asano et al. fail to teach a front panel including a slot therein, the transmission and reception antenna being located outside of the housing when the wireless module is received in the slot and a cover for accommodating the transmission and reception antenna when the wireless module is received in the slot, the first antenna unit, and the second antenna unit, the cover being attached to the front panel of the housing.

In the related art, Crawford teaches a front panel including a slot (read as interface slot 22) therein, the transmission and reception antenna being located outside of the housing when the wireless module is received in the slot (Abstract, Figure 1, and column 3 lines 20-55) and a cover (read as housing of card 26) for accommodating the transmission and reception antenna when the wireless module is received in the slot, the first antenna unit, and the second antenna unit, the cover being attached to the front panel of the housing (Abstract, Figure 1, and column 3 lines 20-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Crawford into the teachings of Asano et al. for the purpose of providing an antenna structure possessing diversity characteristics to improve performance and mitigate interference.

Consider **claim 6, as applied to claim 5 above**, Asano et al. as modified by Crawford further teach a high-frequency amplifier circuit (read as active circuitry 34) having a gain of one or more, the high-frequency amplifier circuit being located between the first and second antenna units (Crawford - Figure 2A, Figure 2B, and column 4 lines 17-32).

Consider **claim 7**, Asano et al. teach a terminal device (read as portable device) for connecting to a wireless network (Abstract, Figure 1, Figure 5, Figure 6, column 3 lines 66-67, and column 4 lines 1-4), the terminal device comprising:

- a housing (read as base unit part 101) (Abstract, Figure 5, Figure 6, and column 4 lines 19-27);

- a wireless module including a transmission and reception antenna (read as radio device (transmitter/receiver assembly) 108) (Abstract, Figure 5, Figure 6, and column 4 lines 19-27);

- a first antenna unit (read as first antenna 106) physically or spatially connected to the transmission and reception antenna (Figure 5, Figure 6, and column 6 lines 20-50); and

- a second antenna unit (read as second antenna 109) connect to the first antenna unit so as to be connected to the transmission and reception antenna via the first antenna unit, the second antenna unit for transmitting and receiving radio signals directly to and from the wireless network (Figure 5, Figure 6, and column 6 lines 20-50).

However, Asano et al. fail to teach a front panel including a slot therein, the wireless module passing through the slot whereby the transmission and reception antenna is located outside of the housing and a cover accommodating the transmission and reception antenna, the first antenna unit, and the second antenna unit, the cover being attached to the front panel of the housing.

In the related art, Crawford teaches However, Asano et al. fail to teach a front panel including a slot (read as interface slot 22) therein, the wireless module passing through the slot whereby the transmission and reception antenna is located outside of the housing and a cover (read as housing of card 26) accommodating the transmission and reception antenna, the first

antenna unit, and the second antenna unit, the cover being attached to the front panel of the housing (Abstract, Figure 1, and column 3 lines 20-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Crawford into the teachings of Asano et al. for the purpose of providing an antenna structure possessing diversity characteristics to improve performance and mitigate interference.

Consider **claim 8, as applied to claim 7 above**, Asano et al. as modified by Crawford further teach a high-frequency amplifier circuit (read as active circuitry 34) having a gain of one or more, the high-frequency amplifier circuit being located between the first and second antenna units (Crawford - Figure 2A, Figure 2B, and column 4 lines 17-32).

Consider **claim 9, as applied to claim 5 above**, Asano et al. as modified by Crawford further teach wherein only the second antenna unit is operable to transmit and receive the radio signals to and from the wireless network (Asano et al. – column 6 lines 20-39).

Consider **claim 10, as applied to claim 7 above**, Asano et al. as modified by Crawford further teach wherein only the second antenna unit is operable to transmit and receive the radio signals to and from the wireless network (Asano et al. – column 6 lines 20-39).

#### ***Allowable Subject Matter***

**Claims 11-16** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: see PTO-892 Notice of Reference Cited.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
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Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

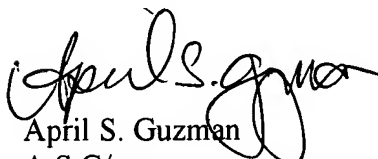
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April S. Guzman  
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1-07-08  
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PRIMARY EXAMINER